

IN THE SPECIFICATION

Please amend the specification at page 5, line 2 through page 9, line 6, as follows:

According to a first aspect of the present design, there is provided a system for inspecting a specimen. The system comprises an illumination system comprising an arc lamp able to provide light energy having a wavelength in the range of approximately 285 to 320 nanometers, and an ~~imaging subsystem oriented and configured to receive the light energy from the illumination system and direct light energy toward the specimen;~~ the imaging subsystem comprising a plurality of lenses and having a field size, wherein a ratio of lens diameter to field size is less than 100 to 1 ~~less than approximately 320 nanometers.~~ and an imaging subsystem oriented and configured to receive the light energy from the illumination system and direct light energy toward the specimen, the imaging subsystem comprising a plurality of elements all aligned along a single axis, each element having diameter less than approximately 100 millimeters, wherein the imaging subsystem is configured to provide a field size in excess of approximately 0.4 millimeters at a numerical aperture of approximately 0.90 for the light energy received from the illumination system having the wavelength in the range of less than approximately 320 nanometers.

According to a second aspect of the present design, there is provided a system for inspecting a specimen. The system comprises an ~~illumination subsystem able to transmit light energy having a wavelength in the range of approximately 157 nanometers through the infrared light range;~~ an imaging subsystem comprising a focusing lens group configured to receive the light energy and comprising at least one focusing lens, and at least one field lens oriented to receive focused light energy from the focusing lens group and provide intermediate light energy. The system further comprises a Mangin mirror arrangement positioned to receive the intermediate light energy from one field lens and form controlled light

~~energy, the Mangin mirror arrangement imparting the controlled light energy to a specimen with a numerical aperture in excess of 0.65, wherein each lens employed in the objective and each element in the Mangin mirror arrangement has diameter less than 100 millimeters. The imaging and illumination subsystems support at least one inspection mode from a group comprising bright field, ring dark field, directional dark field, full sky, aerial imaging, confocal, and fluorescence~~ an illumination system able to provide light energy having a wavelength within a predetermined range, and an imaging subsystem oriented and configured to receive the light energy from the illumination system and direct light energy toward the specimen, the imaging subsystem comprising a plurality of optical elements all aligned along an axis and each having maximum diameter less than approximately 100 millimeters, wherein the imaging subsystem is configured to provide a field size in excess of approximately 0.4 millimeters at a numerical aperture of approximately 0.90.

According to a third aspect of the present design, there is provided a system for inspecting a specimen. The system comprises ~~an illumination subsystem comprising an arc lamp that transmits light energy, an imaging subsystem that receives the light energy comprising an objective constructed of a single glass material for use with light energy having a wavelength in the range of approximately 157 nanometers through the infrared light range. The objective comprises at least one focusing lens having diameter less than approximately 100 millimeters for receiving the light energy and transmitting focused light energy, at least one field lens having diameter less than approximately 100 millimeters for receiving the focused light energy and transmitting intermediate light energy, and at least one Mangin mirror element having diameter less than 100 millimeters receiving the intermediate light energy and providing controlled light energy. The system further comprises a sensor subsystem for receiving controlled light energy reflected from the specimen~~ an illumination system able to provide light energy

having a wavelength within a predetermined range, and an imaging subsystem configured to receive the light energy and direct light energy toward the specimen using a plurality of elements having a maximum diameter less than approximately 100 millimeters, the plurality of elements being free of planar reflecting surfaces, wherein the imaging subsystem is configured to provide a field size in excess of approximately 0.4 millimeters at a numerical aperture of approximately 0.90.

According to a fourth aspect of the present design, there is provided a ~~system-method~~ for inspecting a specimen. ~~The system comprises an illumination subsystem comprising an arc lamp transmitting light energy toward the specimen, an imaging subsystem comprising a plurality of lenses having diameter of less than approximately 25 millimeters receiving the light energy and providing intermediate light energy, a Mangin mirror arrangement receiving the intermediate light energy and providing controlled light energy to the specimen, and an autofocus subsystem employing feedback for purposes of focusing the controlled light energy toward the specimen~~ The method comprises providing light energy having a wavelength within a predetermined range, and receiving the light energy and directing light energy toward the specimen using a plurality of optical elements aligned collectively along a single axis, each optical element having maximum diameter less than approximately 100 millimeter's, wherein the optical elements are configured to provide a field size in excess of approximately 0.4 millimeters at a numerical aperture of approximately 0.90.

~~According to a fifth aspect of the present design, there is provided a system for inspecting a specimen. The system comprises an illumination subsystem comprising an arc lamp and an imaging subsystem comprising a catadioptric objective configured to receive light energy from the illumination subsystem. The catadioptric objective comprises a~~

~~catadioptric group comprising at least one element configured to receive light energy and provide reflected light energy, a field lens group comprising at least one field lens receiving the reflected light energy and transmitting resultant light energy, and a focusing lens group comprising at least one focusing lens receiving resultant light energy and transmitting focused resultant light energy, wherein an imaging numerical aperture for the objective is at least 0.65, the objective having a maximum lens diameter for all lenses employed and a field size, and wherein the ratio of maximum lens diameter to field size is less than 100 to 1. The system further comprises a data acquisition subsystem employing at least one sensor within an imaging subsystem field of view.~~

~~According to a sixth aspect of the present design, there is provided a method of imaging a specimen. The method comprises providing light energy using an arc lamp, focusing received light energy using a focusing lens group, receiving focused light energy and providing intermediate light energy using a field lens group, receiving intermediate light energy and forming controlled light energy using a Mangin mirror arrangement, directing the controlled light energy toward the specimen, repositioning the specimen to collect data, and sensing data received from the specimen. A field size at the sample is supported using the focusing lens group, the field lens group, and the Mangin mirror arrangement, and a ratio of a largest element in the focusing lens group, field lens group, and Mangin mirror arrangement to field size is less than 100 to 1.~~

~~According to a seventh aspect of the present design, there is provided a system for imaging a specimen. The system comprises arc lamp means for providing light energy, means for focusing received light energy using a focusing lens group, means for receiving focused light energy and providing intermediate light energy using a field lens group, means for receiving intermediate light energy and forming controlled light~~

~~energy using a Mangin mirror arrangement, and means for dynamically advantageously positioning the specimen to direct and collect data using a sensor. A field size is supported by using the focusing lens group, the field lens group, and the Mangin mirror arrangement, and a ratio of a largest element in the focusing lens group, field lens group, and Mangin mirror arrangement to field size is less than 100 to 1.~~